

STUDIES ON INDIAN SPECIES OF *CARDIORHINUS* ESCHSCHOLTZ (COLEOPTERA, ELATERIDAE: CARDIORHININAE)¹

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(With eleven text figures)

Key words: New species, *Cardiorhinus* Esch., Elateridae, India.

To the previously recorded single species of genus *Cardiorhinus* Eschscholtz, *C. emarginatus* sp. nov. is added afresh, which is described and illustrated in detail. A combination of significant characters which distinguish it from the previously recorded species are given under diagnostic characters.

INTRODUCTION

Established by Candeze (1863), the subtribe Cardiorhinites, based on genus *Cardiorhinus* Eschscholtz which was raised to subfamily Cardiorhininae by Schenkling (1927) remained unreported from the Indian region till Vats and Chauhan (1993) described one new species *C. truncatus* from this subcontinent. The type species is *C. seminiger* Eschscholtz (1829).

The present text includes two species collected by the authors, of which one new species is described and illustrated, while brief diagnostic characters and illustrations are provided for the known species viz. *C. truncatus* Vats and Chauhan.

Type material of the new species will be deposited at the Division of Entomology, Pusa National Collections, Indian Agricultural Research Institute, New Delhi.

DIAGNOSTIC FEATURES OF THE GENUS: Body pubescent, elongate. Head flat; labrum indented, bilobed; antenna extending beyond posterior angle of prothorax, segment 2 smallest, last segment constricted near apex. Prothorax with posterior margin entire; prosternal spine rounded. Metacoxal plate dilated in the middle. Aedeagus longer than parameres. Parameres simple, with subapical processes.

KEY TO INDIAN SPECIES OF GENUS *Cardiorhinus*

1. Prosternal spine marginate, gradually narrowing at base (Fig. 2); scutellum (Fig. 3) subquadrate, without medial depression, lateral sides straight; elytra emarginate at extremities (Fig. 6) less than 3x prothorax length, striae indistinct.....
..... *emarginatus* sp. nov.
2. Prosternal spine not marginate, abruptly narrowing at base (Fig. 1); scutellum (Fig. 10) subpentagonal with medial depression, lateral sides concave; elytra (Fig. 8) truncate at extremities, more than 3x prothorax length, striae distinct.....
..... *truncatus* Vats & Chauhan

***Cardiorhinus emarginatus* sp. nov.**
(Figs. 1-6)

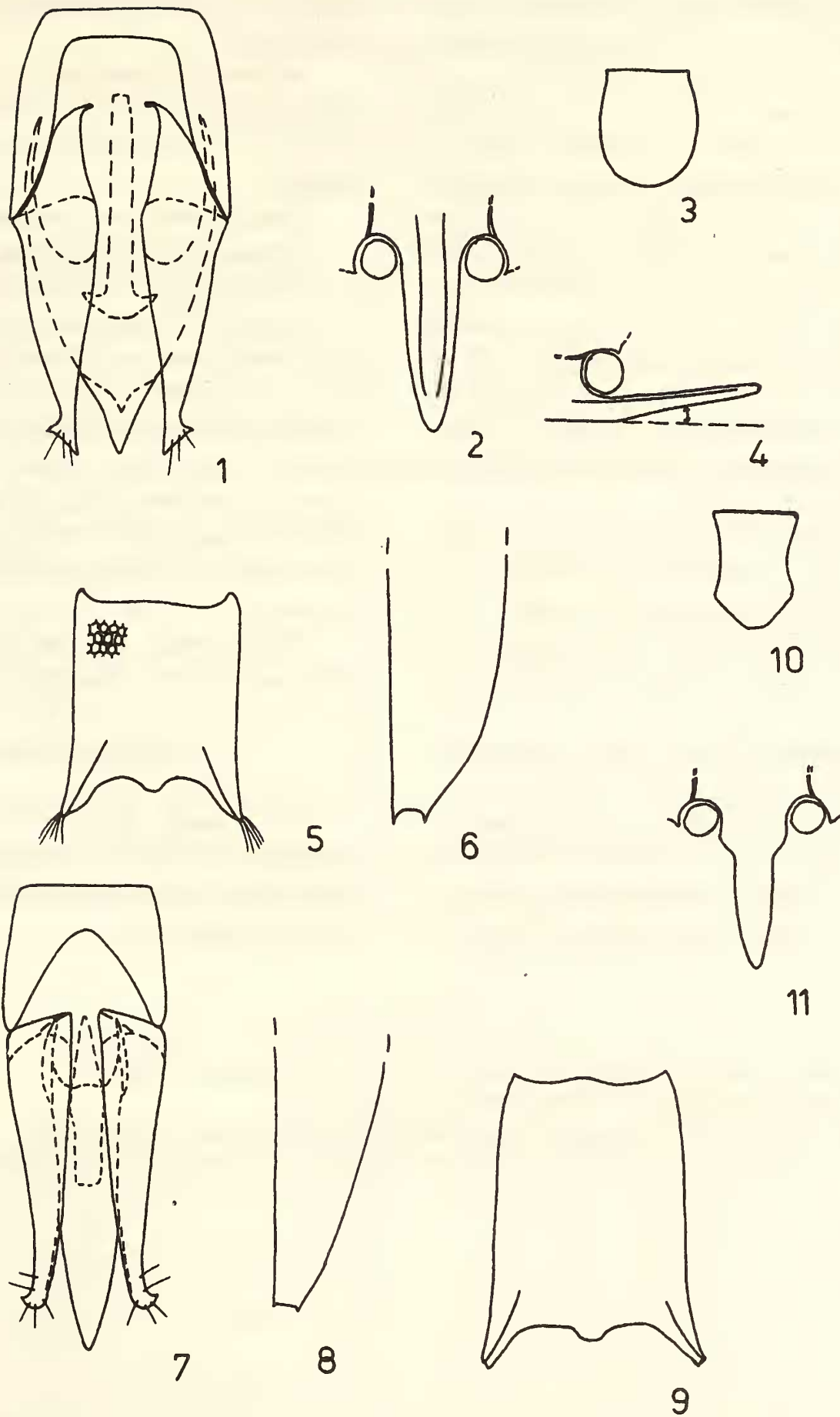
Description: Colour: Body black, legs and antennae fuscous.

Measurements: Body length 3.5 mm; head length 2 mm, width 1.75 mm; antenna 7.75 mm, 2nd segment 0.3 mm, 3rd segment 0.4 mm, 4th segment 0.8 mm, last segment 0.8 mm; thorax length 6 mm, width 3.5 mm; elytra 15.5 mm.

Structure: Body width less than 0.25x its length. Head flat, inclined, longer than broad; frons with anterior margin arcuate; antenna reaching posterior angles of pronotum, segment 3 longer than segment 2 as 4:3 but distinctly

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Figs. 1-6. *Cardiorhinus emarginatus* sp. nov.: 1. Male genitalia, 2. Prosternal spine (Ventral view), 3. Scutellum, 4. Prosternal spine (Lateral view), 5. Pronotum, 6. Elytra (Posterior part);
 Figs. 7-11. *C. truncatus* Vats & Chauhan: 7. Male genitalia, 8. Elytra (Posterior part), 9. Pronotum, 10. Scutellum, 11. Prosternal spine (Ventral view).

shorter than segment 4 as 1:2. Pronotum convex, longer than broad as 12:7; lateral sides parallel, posterior margin entire; posterior angles obliquely truncate with a tuft of setae (Fig. 5), carinate, carina short, not reaching middle of pronotum; prosternal spine rounded, margined, gradually narrowing from base (Fig. 2), declined from its main axis at 10° (Fig. 4). Metasternum truncate between mesocoxae. Scutellum flat, longer than broad as 4:3, anterior margin truncate, posterior margin arcuate (Fig. 3). Elytra convex, 2.6x prothorax length, emarginate at extremities with pointed angles (Fig. 6); striae indistinct. Metabasitarsus shorter than following 2 joints combined as 4:5.

Sculpture: Head with simple, dense, small, hexagonal punctation; pronotum (Fig. 5) and propleurae punctate like head; prosternum with simple, sparse, rounded punctation; elytra with simple, dense, rounded punctation.

Pubescence: Body covered with simple, dense, slanting, yellowish brown pubescence.

Male genitalia: (Fig. 1). Phallobase with straight anterior margin. Parameres simple, with subapical processes. Aedeagus almost equal to parameres, broad, tapering posteriorly into

pointed tip; furcae not reaching anterior margins of parameres.

Material examined: *Holotype:* Male, Assam, Jatinga, 750 m, 15.v.1994, Coll. Punam. *Paratypes:* 2 Females with same data as holotype.

Distribution: INDIA: Assam.

Diagnostic combinations: On the basis of the following significant characters, *C. emarginatus* is separated from *C. truncatus*: elytra emarginate at extremities (truncate in *truncatus*); posterior angle with a tuft of setae (without setae in *truncatus*); prosternal spine gradually narrowing from base (abruptly narrowing in *truncatus*); elytra less than 3x prothorax length (more than 3x in *truncatus*), and scutellum subquadrate (subpentagonal in *truncatus*).

Etymology: Species name alludes to emarginate posterior margin of elytra.

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REFERENCES

- CANDEZE, E. (1863): Monographie des Elaterides IV. *Mem. Soc. r. Sci. Liege*, 17: 1-534.
 ESCHSCHOLTZ, J.F. (1829): Elaterites. In Thom. *Ent. Archiv.*, 2(1): 31-35.
 SCHENKLING, S. (1927): *Coleopterorum Catalogus*, Elateridae II. W. Junk, Berlin, 88: 265-636.
 VATS, L.K. & R.L. CHAUHAN (1993): Four new species of Elateridae (Coleoptera) from North India. *J. ent. Res.*, 17(1): 35-41.